UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

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OFFICE OF
ENFORCEMENT AND
COMPLIANCE ASSURANCE

Mr. Timothy Hunt
Senior Director, Air Quality Programs
American Forest & Paper Association
1111 19th Street, N.W.
Washington D.C. 20036

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Dear Mr. Hunt:

This letter is in response to your February 9, 2007, and March 1, 2007, requests for clarification regarding the implementation of the health based compliance alternative (HBCA) under the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers and Process Heaters (40 CFR Part 63, Subpart DDDDD). Specifically, you are seeking clarification regarding the responses we provided in our October 25, 2006, letter to the State of West Virginia. Your request claims that without clarification our responses may be misinterpreted by delegated state/local regulatory agencies. Our October 25, 2006, letter responded to four questions from the State of West Virginia, each of which is listed below along with our October 25, 2006, response and any clarification based on your February 9, 2007, and March 1, 2007, requests.

As you are probably aware, a federal court has issued an order that could make NESHAP Subpart DDDDD inapplicable in the near future, but the court's order has not yet taken effect. The parties to the case are allowed 45 days to seek rehearing or to request that the rule remain enforceable pending an action by the United States Environmental Protection Agency (EPA) to revise it. If no parties file a request of this nature, the court should issue the formal mandate vacating the rule on or about July 30, 2007. Once the court issues the mandate, the rule would no longer be enforceable. However, if any party to the case files a motion before July 30, asking the court to let the rule remain in effect pending revision of the rule, the rule will remain in effect until the court resolves those requests. EPA is evaluating its options and has not reached any decision whether to request that Subpart DDDDD remain enforceable pending revision. If the mandate vacating Subpart DDDDD is issued, sources that were subject to the rule will need to file applications for permits containing emission limits derived on a case-by-case basis within a time specified by EPA or state permitting authorities.

The State of West Virginia asked:

"1) Are companies required to perform worse-case stack testing for hydrogen chloride (HCl) and fuel analysis for chlorine content for each affected source (i.e., each boiler) or can companies use representative stack testing for the same type of affected sources (i.e., stoker-fired boiler, pulverized boilers, etc.), but may be of different size (i.e., 60 MMBtu/hr, 235 mmBtu/hr, etc.)? Also, are companies required to stack test for HCl on a common stack (i.e., two or three boilers feed one stack) at worse-case conditions or are companies required to stack test each boiler in a duct before a common stack at worse-case conditions?"

EPA Response of October 25, 2006:

"Companies attempting to determine eligibility for the compliance alternative for HCl by stack testing must test the Subpart DDDDD units under "worst case operating conditions" for both HCl and Cl2 using the emission test methods in the table identified as Table 1 to Appendix B of Subpart DDDDD. This is actually Table 1 of Appendix A, because there is a typographical error in the heading. Subpart DDDDD does not contain an Appendix B. Companies attempting to determine eligibility for the compliance alternative for HCl by fuel analysis must test the Subpart DDDDD units under "worst case operating conditions" using the fuel analysis requirements in Table 6 to Subpart DDDDD, and assume any chlorine detected will be emitted as Cl_2. See 40 C.F.R. Subpart DDDDD, Appendix A, Section 4. Since Appendix A does not specify fuel analysis methods, EPA interprets the fuel analysis requirements in 40 CFR Section 63.7521 and Table 6 of Subpart DDDDD to be applicable to eligibility demonstrations for the health based compliance alternatives."

"Companies can not use representative testing when using stack testing to determine eligibility for the compliance alternative for HCl. Each Subpart DDDDD unit must be tested separately, except for Subpart DDDDD units ducted to a common stack. Appendix A of Subpart DDDDD does not address common stack scenarios, but EPA would apply the same common stack principles reflected in 40 CFR Section 63.7522, as amended. EPA has proposed to modify this provision to allow common stack testing. See 70 Fed. Reg. 62264 (Oct. 31, 2005). Thus, under EPA's interpretation of the HBCA eligibility demonstration methodology, multiple Subpart DDDDD units ducted to a common stack can test at "worst-case operating conditions" in the common stack. Companies attempting to determine eligibility under the HBCA for HCl by using fuel analysis are not required to test the fuel for each Subpart DDDDD unit if the units are burning the same fuel. 40 CFR Section 63.7521; 40 CFR Subpart DDDDD, Table 6."

Further Clarification:

The proposed amendments regarding common stack testing and monitoring were promulgated on December 6, 2006 [71 FR 70651].

The State of West Virginia asked:

"2) What parameters are companies required to monitor to demonstrate continuing compliance with the Health Based Compliance Alternative (HBCA) demonstration and at what frequency are companies required to monitor these parameters for the HBCA (if companies conduct stack testing)? Can companies use fuel feed rate based upon back calculating from the boiler steam rate and use chlorine content of the fuel or are other parameters required? And on what frequency (i.e., hourly, daily, etc.) are the parameters required to be monitored?"

EPA Response of October 25, 2006:

"As amended in December 2005, Appendix A, Section 8(d) specifies that companies are required to identify process parameters that define the affected source as eligible for the health-based compliance alternative and to submit those parameters for incorporation into the Title V permit. The source has the discretion to choose appropriate parameters meeting the requirements of Appendix A, Section 8(d), subject to review by the Title V permitting authority. Appendix A does not specify the monitoring frequency for each parameter, but this should be addressed in the proposed Title V permit conditions on a site-specific basis. Companies are required to demonstrate continuous compliance in accordance with the terms of these conditions and to reflect these conditions in their Title V compliance certifications."

Further Clarification:

Appendix A, Section 4(e), *Collection of Monitoring Data for HAP Control Devices* states:

> During the emissions test, you must collect operating parameter monitoring system data at least every 15 minutes during the entire emissions test and establish the site-specific operating requirements in Table 3 or 4, as appropriate, of the subpart DDDDD using data from the monitoring system and the procedures specified in Section 63.7530 of Subpart DDDDD. [Emphasis added.]

Although Tables 3 and 4 include operating limits for companies that choose to demonstrate compliance using fuel analysis, Appendix A, Section 4(e), does not require an owner or operator to conduct fuel analysis testing. The site-specific operating requirements referred to in Appendix A, Section 4(e) only refer to the control devices listed in Tables 3 and 4 (wet scrubber, fabric filter, electrostatic precipitator, dry scrubber, carbon injection, and any other control device).

Appendix A, Section 8(d) states:

> To be eligible for either health-based compliance alternative, the parameters that defined your affected source as eligible for the health-based compliance alternatives must be submitted to your permitting authority for incorporation into your title V permit, as federally enforceable limits, at the same time you submit your health-based eligibility demonstration. These parameters include, but are not limited to, fuel type, fuel mix (annual average), emission rate, type of control devices, process parameters (*e.g.*, maximum heat input), and non-process parameters (*e.g.*, stack height). [Emphasis added.]

Although our October 25, 2006, response states that Appendix A does not specify operating parameter frequency, we inadvertently omitted the fact that we identified that the frequency for the fuel mix operating parameter could be an annual average.

The State of West Virginia asked:

"3) Are companies required to set a maximum upper limit (based upon the worse-case testing) of chlorine content of fuel and operating parameters (i.e., steam rate, etc.) or can companies extrapolate these parameters above the worse-case testing, as long as they do not exceed the risk determination? In other words, can companies use a combination of fuel feed rate (based on calculations from the boiler steam rate), chlorine content of the fuel, and percent HCl from the stack test to determine their maximum HCl emission rate to demonstrate continuing compliance with the HBCA? If the maximum operating parameters (set during the worse-case testing) are not required to be set as an upper enforceable limit, what range for the operating parameters would be required to be incorporated into the Title V permit?"

EPA Response of October 25, 2006:

"Under the HBCA, owners or operators are required to conduct HAP emission tests or fuel analysis for every emission point covered under subpart DDDDD within the affected source facility. Appendix A, Section 4(a). In addition, each test must be conducted under "worst-case operating conditions" as the term is defined in Appendix A, Section 13. Appendix A, Section 4(b)(2). Companies can not extrapolate worst-case emissions in lieu of actual HAP emission tests as part of their updated eligibility demonstration. The maximum operating parameters established during HAP emission tests under "worst-case operating conditions" are required to be incorporated into the Title V permit per Appendix A, Section 8(d)."

Further Clarification:

As stated in Appendix A, Section 4(b)(2), each emission test must be conducted under "worst case conditions." Appendix A defines "worse case operating conditions" to mean:

> Operation of an affected unit during emissions testing under the conditions that result in the highest HAP emissions or that result in the emissions stream composition (including HAP and non-HAP) that is most challenging for the control device if a control device is used. For example, worst-case conditions could include operation of an affected unit firing solid fuel likely to produce the most HAP. [Emphasis added.]

Appendix A, Section 8(a)(3).

Thus, companies must establish the maximum upper limit for the pollutant content of their fuel to ensure the emission test represents the "worst-case operating conditions." It should be noted, however, that Appendix A does not require the upper limit of the pollutant content of the fuel to be incorporated into the Title V permit as an operating parameter. As noted in our response to question 2 above, companies have the discretion to choose the appropriate parameters to satisfy the requirements of Appendix A, Section 8(d). Conversely, as part of the review of the eligibility demonstration, the Title V permitting authority may require companies to set the maximum pollutant content of the fuel as an operating limit if other parameters are insufficient for determining eligibility under the HBCA.

Appendix A, Section 4(g) requires companies to determine the maximum hourly emission rate for each appropriate emission point according to Equation 1, below.

$$E_{i,s} = \sum_{j=1}^{t} \left(R_{i,j} \times I_j \right) \qquad \text{(Eq. 1)}$$

Where:

Ei,s= maximum hourly emission rate for HAP i at each emission point s associated with a subpart DDDDD emission unit j, lbs/hr
i = applicable HAP, where i = (HCl, Cl2, or Manganese) s = individual emission point
j = each subpart DDDDD emission unit associated with an emission point, s
t = total number of subpart DDDDD emission units associated with an emission point s
Ri,j= emission rate (the 3-run average as determined according to table 1 of this appendix or the pollutant concentration in the fuel samples analyzed according to §63.7521) for HAP i at subpart DDDDD emission unit j associated with emission point s, lb per million Btu.
Ij= Maximum rated heat input capacity of each subpart DDDDD unit j emitting HAP i associated with emission point s, million Btu per hour.

Consequently, Appendix A allows companies to extrapolate ("scale up") their maximum hourly emission rate if the maximum rated heat input capacity can not be reached during the emission test. However, it should be noted that emission tests conducted at less than "representative conditions," as the term is described in the Clean Air Act National Stack Testing Guidance, September 30, 2005, would not be acceptable for demonstrating HBCA eligibility.[1]

Notwithstanding the allowance for extrapolating maximum hourly emission rate under the circumstances described above, Appendix A does not permit extrapolation of fuel HAP concentration in order to establish "worst-case operating conditions" In fact, as noted in our October 25, 2006, response, Appendix A explicitly requires each emission test to be conducted under "worst-case operating conditions," which is defined as the ". . . conditions that result in the highest HAP emissions or that result in the emissions stream composition (including HAP and non-HAP) that is most challenging for the control device if a control device is used." Thus, companies may not establish a fuel HAP content operating limit, for incorporation into the Title V permit, above the fuel HAP content of the fuel burned during the emissions test.

Nevertheless, the Agency recognizes the inherent variability of the fuel HAP content in many of the fuels burned in boilers and process heaters. To account for this variability, HBCA eligibility demonstrations, that include fuel HAP content as an operating parameter, could demonstrate continuous HBCA eligibility by ensuring that the annual average fuel HAP content, similar to the fuel mix operating parameter, listed in Appendix A, Section 8(d), is at or below the fuel HAP content of the fuel burned during the emissions test.

Companies that demonstrate HBCA eligibility solely by fuel analysis may use extrapolation in their eligibility demonstration since the fuel analysis option assumes that all HAP contained in the fuel will be emitted out the stack.

The State of West Virginia asked:

"4) Will EPA accept stack test results for the HBCA conducted in accordance with EPA Method 26 and 26A without the required EPA audit samples for QA/QC?"

EPA Response of October 25, 2006:

"Under Subpart DDDDD, the acceptability of an HBCA eligibility demonstration is the responsibility of the state, although EPA will be conducting audits of some demonstrations in its oversight capacity. However, EPA believes it is acceptable to conduct stack tests for the HBCA in accordance with EPA Method 26 and 26A without the required EPA audit samples for quality assurance/quality control (QA/QC)."

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[1] The Clean Air Act National Stack Testing Guidance can be found at: http://www.epa.gov/compliance/resources/policies/monitoring/caa/stacktesting.pdf

Further Clarification:

No further clarification needed.

This response has been coordinated with the Office of Air Quality Planning and Standards and the Office of General Counsel. If you have any questions concerning this determination, please contact Sally Harmon at (202) 564-7012 or Gregory Fried at (202) 564-7016.

Very Truly Yours,

M. S. Alushin

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